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One figure.

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[Title] Hockey stick

The present invention concerns a hockey stick or similar item consisting of a shaft, which in its lower end passes into a blade or the like, at which transition to the blade the shaft is relatively weakly dimensioned in order to allow some degree of shock-absorbing spring action when the stick is used. The aforementioned weak dimensioning of the shaft has the disadvantage that the club shafts often break. Through the present invention the aforementioned disadvantage is eliminated, and the hockey stick is characterized according to the invention by having a reinforcement device, which is intended to stiffen the shaft when the aforementioned part of the shaft has been deflected a small amount for the purpose of shock-absorbing spring action.

In a preferred embodiment of the invention, the reinforcement device consists of amide plastic or similar material, for which reason even the reinforcement device in some situations aids the shock-absorbing spring action of the shaft when the stick is being used. The shock-absorbing spring action of the club's shaft is not eliminated through the invention; on the contrary, the invention makes it possible to give the club shaft an increased amount of shock-absorbing spring action in this range, within which the reinforcement device does not become active. In tight situations the players can therefore now accomplish better shots than before.

The invention will be described in detail in connection with the attached drawing, which depicts one exemplary embodiment of a hockey stick chosen according to the invention. Figure 1 depicts the stick from the side, and Figure 2 depicts it from the back. Figure 3 depicts, on a different scale, a cross-section along the line III-III in Figure 1.

The hockey stick consists of the shaft 1 and the blade 2, the latter being attached at the bottom end of the shaft. As can be seen in Figure 2, the shaft has a decreasing width towards its bottom end.

The shaft 1 thus becomes relatively weakly dimensioned in the vicinity of the transition to the blade 2, and this is true even if the width decreases constantly as is customary with conventional hockey sticks. The aforementioned weakly dimensioned part of the shaft 1 is identified by the reference character 3.

The present invention provides the weakly dimensioned part 3, which is intended to allow some shock-absorbing spring action for the shaft 1 when the stick is used, with a reinforcement device 4, which is arranged such that it stiffens the shaft 1 when the part 3 has been deflected a small amount for the purpose of shock-absorbing spring action. Within certain limits, it is thus true that the shaft 1 maintains its entire shock-absorbing spring action.

According to the preferred embodiment, the reinforcement device 4 should consist of amide plastic or similar material, so that the reinforcement device 4 can aid the shock-absorbing spring action of the shaft 1 when the stick is used.

As is most clear from Figure 3, the invention has made it possible to make the part 3 weaker than has been the case in the prior art, for which reason the shock-absorbing spring action within that range in which the reinforcement device 4 does not become active has been increased. The weakening of the part 3 has been accomplished through the removal of concave regions 5 of material from the part 3.

As may be deduced from the above description, the stick allows two kinds of shock-absorbing spring action, where the first is entirely determined by the area 3 and the second entirely determined by the area 3 in combination with the reinforcement device 4. The former is used in tight situations, where less force is available for the shot, and the latter in other situations when truly hard shots are desired.

According to the embodiment shown in the drawing, the reinforcement device 4 consists of a case or the like attached on the shaft 1 over the relatively weakly dimensioned part 3, which case is, at its first end 6, firmly attached to the shaft 1 and which, at its other end 7, is located some distance from the shaft 1. The case 4 is arranged such that it is slipped over the shaft 1 before the blade 2 is glued or otherwise attached to the shaft 1.

According to the preferred embodiment, the case 4 should be shaped such that it comes into firm attachment to the shaft 1 at its upper end 6, whereas the lower end 7 is located some distance from the shaft 1. Accordingly, the case 4 can have a constant cross section as shown in Figure 3. The distance from the case end 7 to the shaft 1 is however determined from situation to situation, whereby the desired spring action, the material of the shaft, and the dimensioning of the shaft end 3 are the important determining parameters. Should the case 4 consist of amide plastic or some similar strong material, it should suffice to make it approximately 2 millimeters thick. At

least at the end 7 the case 4 should have a successively decreasing thickness such that a smooth transition between the shaft 1 and the case 4 is obtained.

The invention is not limited to that which is described above and which is shown in the drawing, but it can be changed within the limits of the following claims. It can also be used in field hockey sticks, bandy sticks, and the like.

**Patent claims:**

1. Ice hockey stick and the like consisting of a shaft (1), which at its lower end transitions to a blade (2) or the like, whereby the shaft (1) in the vicinity of the transition to the blade (2) is relatively weakly dimensioned to allow a certain degree of shock-absorbing spring action during the use of the stick, characterized by the attachment of a reinforcement device (4) to the relatively weakly dimensioned part (3) of the shaft (1), which device (4) is arranged to stiffen the shaft (1), when the aforementioned part of the shaft has been given a small amount of deflection for the purpose of shock-absorbing spring action.

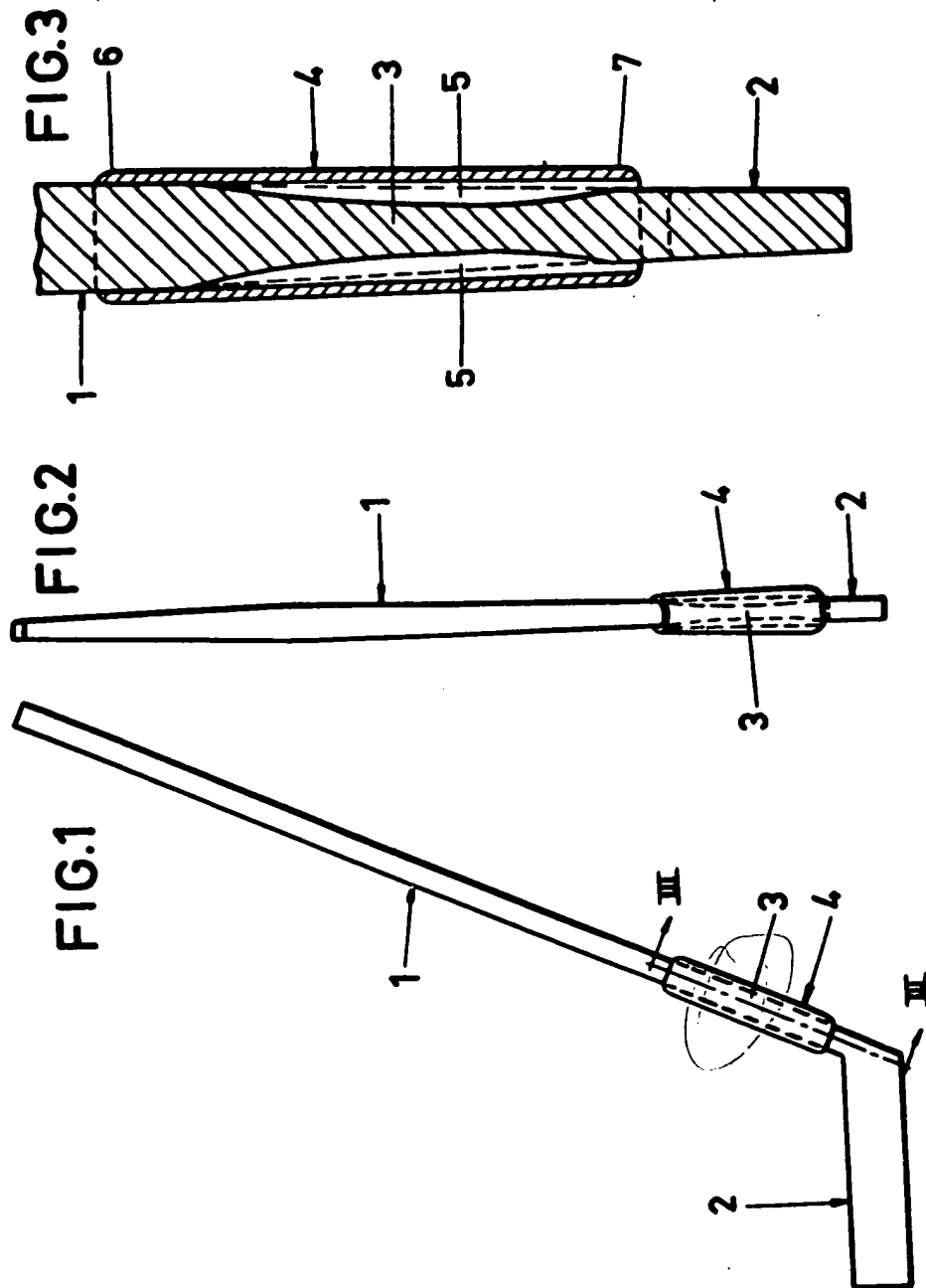
2. Ice hockey stick according to claim 1, characterized in that the reinforcement device (4) consists of amide plastic or similar material, whereby the reinforcement device (4) in some applications also aids the shock absorbing spring action of the shaft (1) when the stick is used.

3. Ice hockey stick according to claim 1 or 2, characterized in that the reinforcement device (4) consists of a case or the like attached on the shaft (1) over the relatively weakly dimensioned part (3), which device (4) with its first end (6) is in firm attachment to the shaft (1) and which with its other end (7) is located some distance away from the shaft (1).

4. Ice hockey stick according to the claim 3, characterized in that its case (4) is in firm attachment to the shaft (1), while its lower end (7) is located some distance from the shaft (1).

**Prior Art Documents Cited**

United Kingdom 731,382.





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Reichspatentamt - Imperial Patent Office [Germany]

Patent Publication

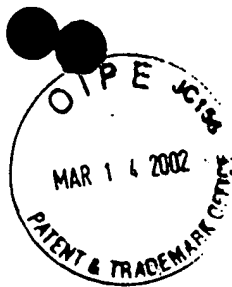
No. 376009

Class 77a - Group 22

(S 58336 IX/77a)

Wilhelm Spath in Munich

Hockey club



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376009

Wilhelm Späth in Munich

Hockey club

Patented in the German Imperium as of December 13, 1921

Current hockey clubs have little elasticity and consequently their effect regarding the transfer power is very limited.

It is the object of this invention to solve this lack of power.

The drawing depicts the hockey club and shows in

Fig. 1 a frontal view

Fig. 2 a side view

Fig. 3 a cross section following line A-B in Fig. 1.

The hockey club consists of the handle a and the hitting part b. According to the invention a flat part c is provided between the two parts thus flexibly connecting the two parts a and b thereby providing the advantages of elastic play.

**Patent claim:**

Hockey club, characterized by a flattening (c) of the stick between the handle (b) and the hitting part (b) for the purpose of achieving a flexible impact by the club when hitting.

Attached: 1 page with Figs. 1, 2 and 3

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Zu der Patentschrift 37600  
Kl. 77a Gr. 22

1921

Abb. 1.

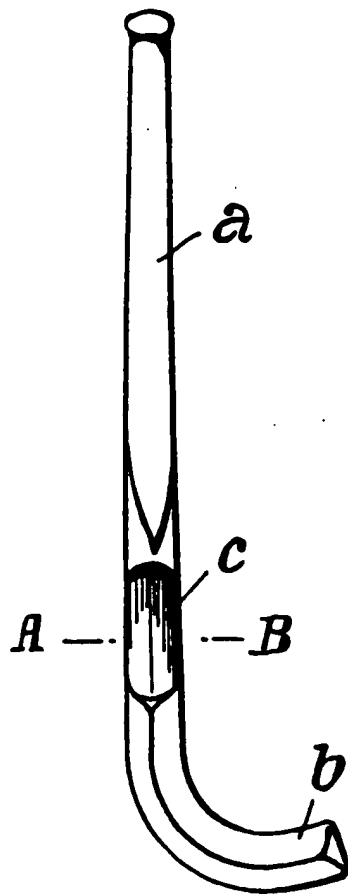


Abb. 2.



Abb. 3.



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